



THE UNIVERSITY *of* EDINBURGH

Edinburgh Research Explorer

Science and religion

Citation for published version:

Fuller, M 2018, 'Science and religion: Towards a fresh engagement' *SEARCH – A Church of Ireland Journal*. <<http://www.searchjournal.ireland.anglican.org>>

Link:

[Link to publication record in Edinburgh Research Explorer](#)

Document Version:

Peer reviewed version

Published In:

SEARCH – A Church of Ireland Journal

Publisher Rights Statement:

This is the accepted manuscript of the article published by SEARCH www.searchjournal.ireland.anglican.org

General rights

Copyright for the publications made accessible via the Edinburgh Research Explorer is retained by the author(s) and / or other copyright owners and it is a condition of accessing these publications that users recognise and abide by the legal requirements associated with these rights.

Take down policy

The University of Edinburgh has made every reasonable effort to ensure that Edinburgh Research Explorer content complies with UK legislation. If you believe that the public display of this file breaches copyright please contact openaccess@ed.ac.uk providing details, and we will remove access to the work immediately and investigate your claim.



Science and Religion: Towards a fresh engagement

Introduction

A remarkable phenomenon of recent decades has been the propagation of the idea that ‘science’ and ‘religion’ must be thought of in terms of rivalry and disagreement, to the extent that some have even maintained them to be fundamentally incompatible.¹ However, the idea that religion and science are, of necessity, mutually antagonistic is a myth. It is, to be sure, a myth which runs deep in Western society today: indeed, as one scholar has put it, ‘The secular public, if it thinks about such issues at all, *knows* that organised religion has always opposed scientific progress ... [t]he religious public *knows* that science has taken the leading role in corroding faith’.² Now it is, of course, the case that some forms of religious expression (notably, in the West, certain kinds of conservative Protestantism) pit themselves against some forms of science; and, similarly, some scientific commentators (notably, those espousing a metaphysical position which is known as scientism – see later) pit themselves against religious belief. However, these groups should in neither case be seen as espousing views which it is necessary for religious or scientific practitioners to uphold. There is nothing that is essential to the practice of either religion or science that precludes the other.

This should not surprise us. A moment’s reflection enables us to see that ‘religion’ is a very wide-ranging, blanket term which covers ways of living that may or may not involve (for example) belief in a God or gods, ritual practices and observances, the use (in a variety of ways) of texts accorded sacred status, and so on. Similarly, ‘science’ is generally reckoned to involve fields of study as diverse as particle physics and palaeontology (let alone those social sciences which seek to understand all aspects of human life, including religious behaviour): what, if anything, these disparate pursuits might have in common – whether, for example, they all subscribe to some ‘scientific method’, and if so what that method looks like – is much discussed.³ The idea that there is some essence of science and of religion which

necessarily pits the two against each other can only be sustained by special pleading: by insisting that certain antagonistic expressions of science and of religion represent some kind of norm, and by dismissing out-of-hand any alternative voices which advocate more moderate views. (These are indeed the tactics deployed in the writings of both scientific and religious upholders of the ‘conflict myth’: this perhaps in part accounts for the lurid rhetoric which is not infrequently to be found in such writings.⁴)

Alongside popular writings on science and religion, a burgeoning field of science-and-religion studies has flourished in the academy in recent decades. Such studies have tended to eschew the conflict myth, firstly through analyses of its historical origins (which have exposed the motivations behind the inception and propagation of the myth), and secondly by furthering a dialogue between science and theology – through exploring what each of these approaches to understanding might have to offer the other. This paper looks briefly at the fruits of such studies. It is apparent, however, that although the idea that science and religion are necessarily in conflict has been widely discredited in the academy, it retains a popular currency which academic studies have (so far) failed to dispel. This paper therefore goes on to urge that a different approach is required, and observes that a model for such an approach may be seen in the ecumenical movement within the Christian Churches.

Where has the conflict myth come from?

Whilst the origins of an idea like the conflict myth will inevitably be complex, many scholars point to publications in the late nineteenth century as particularly influential in its formation, frequently citing two books by American authors: J. W. Draper’s ‘History of the Conflict between Religion and Science’ (1874) and A. D. White’s ‘A History of the Warfare of Science with Theology in Christendom’ (1896). The titles of these books make their intentions plain; however, it has been noted that ‘Historians of Science have known for years

that White's and Draper's accounts are more propaganda than history',⁵ and that both reflect particular personal concerns of their authors. One striking aspect of this late nineteenth century development of the conflict myth was the construction of historical narratives that support it, projecting this assumed antagonism of science and religion into the past – even though the terms 'science' and 'religion' have evolved over time, and have not always carried their modern significances. To take a celebrated example, the trial of Galileo by the Church authorities of his day has come to be widely seen as an instance of a clash between 'science' and 'religion', even though Galileo would have considered himself a natural philosopher rather than a scientist in the modern sense of the word; and modern studies have done much to uncover the complex combinations of social and political factors which lay behind Galileo's condemnation, and which played every bit as important a role in the 'Galileo affair' as science or religion *per se*.⁶

Although it is of course possible to construct historical narratives stressing occasions on which some 'scientific' discovery is seen as dealing a blow to some aspect of 'religious' belief, such narratives need to be read with a degree of scepticism, for at least two reasons. The first is that the kind of complexity found in the case of Galileo may very frequently be encountered in other historical episodes, too, with a consequent difficulty in saying unequivocally that such episodes are 'about' science and religion. One scholar who has done more than any other to point out this complexity is John Hedley Brooke, the first holder of the Andreas Idrios Chair in science and religion at the University of Oxford. Brooke observes that

Serious scholarship in the history of science has revealed so extraordinarily rich and complex a relationship between science and religion in the past that general theses are difficult to sustain. The real lesson turns out to be the complexity. ... Conflicts allegedly between science and religion may turn out to be between rival scientific

interests, or conversely between rival theological factions. Issues of political power, social prestige, and intellectual authority have repeatedly been at stake. And the histories written by protagonists have reflected their own preoccupations.⁷

The second reason for reading critically those historical accounts which pit ‘science’ against ‘religion’ is that the ‘religious beliefs’ of an historical period may themselves be varied rather than uniform. To return to the case of Galileo, when he proposed treating the Copernican hypothesis (that the sun, rather than the earth, is at the centre of the solar system) as a fact, there were some who saw this as deeply problematic, since it appears to directly contradict certain passages in Scripture. Others saw no problem in treating such passages in non-literal ways: a contemporary churchman came up with the aphorism that ‘the Bible teaches us how to go to heaven, not how the heavens go’.⁸ For such people, there was no reason to see a necessary clash between religious beliefs and scientific observations. The idea that there is only one ‘religious’ view on an issue can usually be upheld only by attending to one voice and suppressing others – and this is as true of the past as it is of the present day.

Attempts to address the conflict myth

A milestone in the contemporary study of science and religion was the publication of Ian Barbour’s ‘Issues in Science and Religion’ in 1966. In that book, and in subsequent works such as ‘Religion and Science: Historical and contemporary issues’ (1997), Barbour developed a ‘fourfold paradigm’ for understanding the ways in which science and religion might interrelate: conflict, independence, dialogue, and integration.⁹ Although much critiqued and expanded-upon subsequently by others, Barbour’s approach has the virtue of simplicity, and it immediately highlights that there are other ways of thinking about science and religion apart from seeing them as being in conflict. When looking at Barbour’s alternative categories, some have seen problems with the idea that it might be possible to integrate science and

religion fully,¹⁰ but many have seen value in maintaining the idea that science and religion essentially function independently of one another. A celebrated example of this approach is the idea of ‘non-overlapping magisteria’ proposed by Steven Jay Gould: ‘Science tries to document the factual character of the natural world, and to develop theories that coordinate and explain those facts. Religion, on the other hand, operates in the equally important, but utterly different, realm of human purposes, meanings and values – subjects that the factual domain of science might illuminate, but can never resolve’.¹¹

Others, though, have felt that such ‘independence’ is too restrictive a model for understanding how science and religion can interrelate, and have insisted that science and religion can and should engage in a relationship characterised by dialogue, from which each might benefit through a consideration of insights provided by the other. In the UK context, writers such as Arthur Peacocke, John Polkinghorne and Alister McGrath have taken this position, developing what might be considered a form of Christian apologetics addressing a scientifically-informed age.¹²

Philosophical approaches, too, have been made to the question of why science and religion might be seen to be opposed to one another. It has been suggested, for example, that this perception is due to an equating of ‘science’ with a philosophical materialism, the assumption that nothing exists apart from material entities.¹³ This generates a metaphysical position known as scientism: the view that science alone is able to make meaningful statements about any and all of the phenomena which we encounter. There is, of course, a huge difference between assuming that only material considerations need to be taken into account in conducting a scientific experiment, and insisting that only material things exist. The former is a pragmatic assumption: the latter constitutes a metaphysical belief – and is itself incapable of scientific demonstration.

Valuable as such historical, theological and philosophical work has been in developing a dialogue between science and religion, various criticisms might be levelled at it. First, it has been noted that traffic in this ‘dialogue’ has been conspicuously one-way: theologians have to date benefitted rather more from it than have scientists.¹⁴ Second, the historian Peter Harrison has charted the ways in which the words ‘science’ and ‘religion’ have changed over the centuries, and how they came to take on the nuances they now have (whereby it is widely believed that ‘science’ is concerned with the empirical observation of natural phenomena, and ‘religion’ is concerned with holding certain beliefs and undertaking certain practices) at the time of the Enlightenment. Harrison urges that ‘science and religion ... are ways of conceptualising certain human activities – ways that are peculiar to modern Western culture, and which have arisen as a consequence of unique historical circumstances’.¹⁵ Harrison further maintains that, understood in this way, the modern constructions ‘science’ and ‘religion’ have mutual conflict built into them, since they are designed so that they can be used for the same ends (for example, in giving explanations for things). This is something which needs to be borne in mind as we consider ways in which attempts have been made to move beyond the ‘conflict myth’.

And a third problem with the positive dialogue between science and religion which has been developed within academic circles is that it has had little impact outside them. Why this should be the case is a complex issue, but it may relate to the ‘adversarial’ context in which much of the engagement of science and religion has been set (in the West, at least). Framing science-and-religion encounters in the form of debates, or their equivalents, immediately puts us into that context alluded to at the start of this paper, in which disagreement is *expected*. Confirmation bias is then likely to come into play: participants in such debates are more likely to have their existing beliefs confirmed than to have them challenged (still less to have those beliefs changed in any meaningful way).

For all these reasons, I believe that a new kind of engagement between members of scientific and religious communities is called for.

A new form of engagement

The problem this paper has identified may be summarised as follows: academic studies suggest that the idea of ‘science’ and ‘religion’ as necessarily in opposition to one another are unsustainable. But such studies have yet to make much headway against the popular view that such an antagonism is unavoidable. Not only that: those who hold to such a view are highly unlikely to have their views changed through a process of debating the issues. The efforts of Barbour and his successors to refute the notion that science and religion are locked in conflict are undoubtedly well-meaning, and may have done much to encourage those who might feel their religious convictions to be under threat from scientific advances, but there is an extent to which they inadvertently reinforce the ‘conflict myth’ by insisting that some rapprochement is required between science and religion.

How is this problem to be addressed? What is required, surely, is a new way of bringing together those whose worldviews are shaped by religious ideas and those whose worldviews are shaped by scientific ideas (not to mention those – probably, in fact, a majority in the West – whose worldviews are shaped by both, but who will attribute a priority to one or the other at different times, depending on context) in a non-combative way, such that each may engage with and learn from one another. The goal of such encounters may not be ‘conversion’ from one worldview to the other, but rather an increase in understanding, trust and respect for those with different views to one’s own. In this way, it is to be hoped, the kinds of crude caricatures and vilification that have characterised much of the writing upholding the ‘conflict myth’ can be circumvented and, perhaps, a broader perspective on our world, and on what it means to be a human being within that world, might be encouraged.

In the Western context, a model for such engagement lies to hand. A legacy of Western Church history is the Reformation, which brought with it much enmity and violence as Catholics and Protestants each insisted on the truth of their own confession, and the falsity of that of their rivals. Each side could narrate histories stressing the heroism of their own witnesses, and demonising the iniquities of the other side. In addition, there were of course political and social factors which shaped and intensified the partisanship in different contexts. The result was centuries of mistrust and mutual misunderstanding between communities in Western Europe.

The twentieth century brought radical changes to this situation as the ecumenical movement gained ground, bringing Churches together to discuss their disagreements and to lay a fresh emphasis on those things which united rather than divided them. In due course this movement has borne fruit in the production of literature of various kinds, such as ‘agreed statements’ drawn up by doctrinal experts from different denominations, offering ways in which both sides can come to a rapprochement on issues previously considered divisive,¹⁶ and plans of action devised by bodies such as the World Council of Churches as means of encouraging different Churches to work together in partnership.¹⁷

Now, there is a sense in which the work of science-and-religion scholars might be thought of as akin to that of those denominational doctrinal experts, finding ways of reconciling differences which have become engrained in peoples’ thinking through re-examining the historical provenance of those differences, and through exploring those things which unite rather than divide people on both sides of the issue. As we have seen, big strides have been made in these areas by such scholars. But in the same way that many churchgoers ‘on the ground’ may be only dimly aware of the statements produced by doctrinal commissions, and may harbour deep-set (if perhaps unconscious) prejudices which it may be

hard to expose, let alone dislodge, so those caught up in the science and religion debate may remain unaffected by such scholarship. How, then, might such people be engaged?

Within the ecumenical movement, one thing that has been remarkably effective in bringing together different Churches has been through the pooling of resources to address issues which all can acknowledge to be of concern. Often this will involve not ‘top-down’ initiatives from Church hierarchies, but rather ‘bottom-up’ grassroots activities aimed at tackling issues at a local level. Thus Churches in a local community might find themselves working together to address the needs of that community, for example through their provision of social care through foodbanks or shelters for the homeless. Since most people would acknowledge it to be an aim of both science and religion to promote human flourishing, then perhaps we might look towards similar projects to engage both sides within the science-and-religion debate.

In fact, many such projects already exist. One might cite as examples the Eco-congregations project, which seeks to bring together religious and scientific expertise in promoting ecologically-friendly practices within Churches;¹⁸ or the ‘Scientists in Congregations’ project, which seeks to promote ‘a sustained, creative collaboration between practitioners in the fields of science and pastoral leaders who are already engaged with one another through shared participation in the life of a congregation’.¹⁹ Of particular note are chaplaincies in hospitals and hospices, which are now well established as a means of engaging medical and religious practitioners together in seeking the best way(s) of addressing the needs of individuals in their care.²⁰ Through such initiatives as these, greater understanding between scientific and religious practitioners can be fostered and encouraged, and mistrust (which may often prove to be founded on ignorance) may be overcome. Other projects may arise to address particular issues in local settings – monitoring and addressing

pollution in urban environments, perhaps, or encouraging the local uptake of public health initiatives like vaccination programmes.

Conclusion

Despite the significant scholarly debunking of the idea that science and religion need to be seen as antagonistic, there remains a widespread view – bolstered by populist writings on both sides – which sees conflict between the two as inevitable. It may be that scholarship in this area will eventually start to be more widely disseminated, and to have a greater influence on public opinion; but a further way of promoting a mutually-beneficial interaction between ‘science’ and ‘religion’ is through practitioners in both these areas coming together in order to promote better understandings through their engagement in practical projects. Fruitful action on the part of individuals working together in this way may prove a better way forward than sterile, abstract, debate: as Alister McGrath has noted, ‘In our postmodern culture, embodiment trumps argument’.²¹ Such projects are already being undertaken, and it is to be hoped that they may become more widespread, both through local initiatives and through religious and scientific hierarchies alike recognising the benefits that they can bring, and promoting them accordingly. Science and religion both have vitally important things to say to us, about our humanity and about our place within the world. Working together, they have so much more capacity to enable human flourishing than is possible when they are unnecessarily seen as antagonistic to one another.

Michael Fuller is a Teaching Fellow at New College, University of Edinburgh. He is Chair of the Science and Religion Forum and Vice-President for Publications of the European Society for the Study of Science and Theology. He has authored and edited eight books and numerous articles on the interactions of science and religion.

Notes

¹ Most prominent among such writings have been those of the ‘new atheists’, for example D. Dennett, *Breaking the Spell* (London: Penguin) 2006, and R. Dawkins, *The God Delusion* (London: Black Swan) 2007.

² R. Numbers (ed.), *Galileo Goes To Jail, and other myths about science and religion* (Cambridge, Mass: Harvard University Press) 2009, p. 6.

³ See, e.g., P. Harrison, *The Territories of Science and Religion* (Chicago: University of Chicago Press) 2015, ch. 6.

⁴ For a discussion of the role of rhetoric in Dawkins’ *The God Delusion*, see M. Fuller, ‘Reticence, Reason and Rhetoric: Some responses to Richard Dawkins’ *The God Delusion*’, *Expository Times* vol. 121 (2010), pp. 489-494.

⁵ Numbers, *Galileo Goes to Jail*, p. 6.

⁶ See, e.g., M. Sharratt, *Galileo: Decisive Innovator* (Cambridge: Cambridge University Press) 1996; M. A. Finocchiaro, ‘Myth 8: That Galileo was imprisoned and tortured for advocating Copernicanism’, in R. Numbers, *Galileo Goes to Jail*, pp. 68-78.

⁷ J. H. Brooke, *Science and Religion: Some historical perspectives* (Cambridge: Cambridge University Press) 1991, p. 5.

⁸ Cesare Baronius, quoted in Drake, *Galileo*, p. 29.

⁹ See I. Barbour, *Religion and Science: Historical and contemporary issues* (London: SCM Press) 1997, ch. 4.

¹⁰ Cf. J. Polkinghorne, *Scientists as Theologians* (London: SPCK) 1996, p. 6 ff.

¹¹ S. J. Gould, *Rocks of Ages: Science and religion in the fullness of life* (London: Jonathan Cape) 2001, p. 4.

¹² See, e.g., A. Peacocke, *Paths from Science Towards God: The end of all our exploring* (Oxford: Oneworld Publications) 2001, J. Polkinghorne, *Science and Religion in Quest of Truth* (London: SPCK) 2011, A. McGrath, *Enriching our Vision of Reality: Theology and the Natural Sciences in Dialogue* (London: SPCK) 2016.

¹³ See K. Ward, *God Chance and Necessity* (Oxford: Oneworld) 1996, p. 11 ff.

¹⁴ C. Southgate and M. Poole, ‘Introduction’, in C. Southgate (ed.), *God Humanity and the Cosmos* (3rd edition, London: T&T Clark) 2011, p. 29.

¹⁵ Harrison, *Territories*, p. 194.

¹⁶ For an influential example of this, see Anglican-Roman Catholic International Commission, *The Final Report* (London: SPCK) 1982.

¹⁷ See, e.g., the WCC report *From Harare to Porto Allegre 1998-2006* (Geneva: World Council of Churches) 2005.

¹⁸ See <http://www.ecocongregation.org/> (accessed 3 January 2018).

¹⁹ See <https://arts.st-andrews.ac.uk/scientistsincongregationsscotland/about/> (accessed 3 January 2018).

²⁰ For further information on healthcare chaplaincy, see <https://www.healthcareers.nhs.uk/Explore-roles/wider-healthcare-team/roles-wider-healthcare-team/corporate-services/chaplain> and links therein (accessed 3 January 2018).

²¹ A. McGrath, *Enriching our Vision of Reality*, p. ix.